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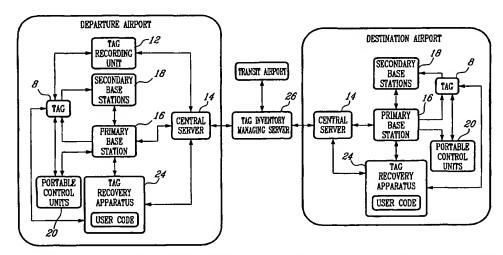
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(54) Title: WIDE AREA AND LARGE CAPACITY INTELLIGENT OBJECT TRACKING SYSTEM AND METHOD



(57) Abstract: The wide area object and large capacity tracking system comprises a plurality of tags (8) to be attached to an object to be tracked and being configured so as to generate and transmit a tag signal indicative of the object-related information, a tag-recording unit (12) configured to program a tag's memory with object-related information pertaining to the object to which the tag is attached, a central server (14) including a memory for storing the information stored to the tags; primary base stations (16), each being coupled to the central server (14) and being coupled to a pair of secondary base stations (18) so as to define a tag detecting cell; each of the primary and secondary base stations being configured to receive tag signals, each yielding three received signals indicative of the location of a tag within the cell; and at least one portable control unit (20) wirelessly coupled to the system and being configured to receive tag signals and object-related information. The system allows determining both in which cell each tag is located and its precise location in the cell.

INTERNATIONAL SEARCH REPORT

tional Application No CA 03/01242

a. classification of subject matter IPC 7 G06K7/00 G06K17/00 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 G06K Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, WPI Data, PAJ C. DOCUMENTS CONSIDERED TO BE RELEVANT -Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. GB 2 312 801 A (TAGWARE LTD) 5 November 1997 (1997-11-05) X 1-5,7, 11, 36-39, 45-47, 57,58, 60,61, 64-66, 76-83,87 6,8-10, A 48-56,59 the whole document Α US 6 380 894 B1 (BOYD ROBERT W ET AL) 1-11.30 April 2002 (2002-04-30) 36-39. 57-61, 64-66, 76-83,87 the whole document Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 0 5. 03. 04 26 November 2003 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016

Geiger, J-W



International Application No PC-7CA 03/01242

		PC+7CA 03/01242
	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/057192 A1 (ANDERSON III ARTHUR E ET AL) 16 May 2002 (2002-05-16) paragraph [0071] - paragraph [0139]	1-11, 36-39, 45-47, 57-61, 64-66, 76-83,87
A	US 6 433 687 B1 (FUTAKAWA MASAYASU ET AL) 13 August 2002 (2002-08-13) the whole document	1-11, 36-39, 45-47, 57-61, 64-66, 76-83,87
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INTERNATIONAL SEARCH REPORT

PCT/CA 03/0124

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).
Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)
This International Searching Authority found multiple inventions in this international application, as follows:
see additional sheet
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: 1-11, 36-39, 45-61, 64-66, 76-83, 87
Remark on Protest The additional search fees were accompanied by the applicant's protest. No protest accompanied the payment of additional search fees.

Form PCT/ISA/210 (continuation of first sheet (1)) (July 1998)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-11,36-39,45-61,64-66,76-83,87

Retriving of information from an inventory system concerning the location of objects everywhere in the space of surveillance

2. Claims: 12-16

Activating of tags by a central server

3. Claims: 17-20

Tracking of tags by means coupled to a central cerver

4. Claims: 21-29

Loading/configuring of tags in a system

5. Claims: 30-33

Removing tasks from a server

6. Claims: 34,35

Installing means in a server which render a permanent availability

7. Claims: 40-44

Forming tags suited to be fixed to objects

8. Claims: 62,63

Method of triggering tags in a system

9. Claims: 67-75, 84-86

Accelerating a process determinating the location of tags

INTERNATIONAL SEARCH REPORT

formation on patent family members

International Application No PCI_CA 03/01242

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